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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,807	01/27/2004	James F. Garvey	92214.418006	2456
23469	7590	04/03/2007	EXAMINER	
JAECKLE FLEISCHMANN & MUGEL, LLP 190 Linden Oaks ROCHESTER, NY 14625-2812			CONLEY, SEAN EVERETT	
			ART UNIT	PAPER NUMBER
			1744	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/765,807	GARVEY ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Sean E. Conley	1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 19 January 2007.  
 2a) This action is FINAL.                  2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 22-42 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 42 is/are allowed.  
 6) Claim(s) 22-41 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 1/27/2004 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/19/2007</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 19, 2007 has been entered.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 22-37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Independent claim 22 claims a method

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comprising the step of "operating the one or more positive-displacement pumps connected in series at pressure ratios such that the passage of the fluid containing biological contaminants through the one or more positive-displacement pumps connected in series kills substantially all of the biological contaminants in the fluid."

However, the specification only provides an adequate written description for the step of operating the one positive-displacement pump or multiple positive displacement pumps connected in series at pressure ratios such that the passage of the fluid containing Bacillus globigii (Bg) (which is an anthrax stimulant) through the one or more positive-displacement pumps connected in series kills substantially all of the Bacillus globigii in the fluid. Thus the specification only provides an adequate written description for killing anthrax spores. With regards to biological contaminants, there is only adequate written description in the specification for altering all biological contaminants. There is no description of a process for killing all biological contaminants.

4. Claims 22-41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, claim 22 includes the step of "passing a fluid containing biological contaminants through one or more positive-displacement pumps connected in series". It is unclear to the examiner as to how one positive displacement pump is connected in series if it is not connected to anything else. The examiner suggests rewriting the step

to include: "passing a fluid containing biological contaminants through one positive displacement pump or through multiple positive displacement pumps connected in series."

Similar unclear claim language can be found in claims 23-26 and 34-41. Regarding claim 26, if there is only a single positive displacement pump then the pressure ratio is not compared to another pump and therefore cannot be the "same" as claimed.

Claims 27-33 are rejected because they depend from and include all of the limitations of independent claim 22.

#### ***Allowable Subject Matter***

5. Claims 38-41 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter: The prior art, alone or in combination, fails to teach or fairly suggest a method for killing at least 99.9% of the anthrax spores in a fluid, comprising the steps of: a) passing a fluid containing anthrax spores through one positive-displacement pump or multiple positive displacement pumps connected in series; and, b) operating the positive-displacement pump at a pressure ratios such that the passage of the fluid containing anthrax spores through the one positive-displacement pump or multiple

positive-displacement pumps connected in series kills at least 99.9% of the anthrax spores in the fluid.

The closest prior art is Lynch et al. (U.S. Patent No. 5,271,557) and Grenci et al. (U.S. Patent No. 5,979,075).

Lynch et al. discloses the use of a Roots-type blower to increase the temperature and pressure of a gas stream containing volatile organic contaminants in order to facilitate removal of the contaminants downstream in a carbon adsorption processing unit. Lynch et al. does not teach or suggest a process for killing at least 99.9% of anthrax spores in the fluid using the positive displacement pump operated at an increased pressure ratio.

Grenci et al. discloses a method of altering a fluid-borne contaminant, comprising the steps of: providing a roots-type positive displacement pump (2) having an inlet (11) and an outlet (12); connecting said pump inlet to a source of contaminated fluid (recirculating purge gas containing contaminants such as hydrocarbons); operating said pump at a pressure ratio sufficient to elevate the pressure and temperature of the fluid and certain contaminants passing through the pump to alter substantially all of said contaminants passing through said pump (see col. 1, claims 13-28; col. 2, lines 25-60; col. 4, lines 1-31; col. 7, lines 1-15; claims 1-7). However, Grenci fails to disclose a process for killing substantially all biological contaminants on the fluid. More specifically, Grenci et al fails to teach a process of killing at least 99.9% of anthrax spores in the fluid using a positive displacement pump operated at an increased pressure ratio.

6. Claim 42 is allowed.

The following is an examiner's statement of reasons for allowance: The prior art, alone or in combination, fails to teach or fairly suggest a method for killing at least 99.9% of the anthrax spores in a fluid, comprising the steps of: a) passing a fluid containing anthrax spores through a positive-displacement pump; and, b) operating the positive-displacement pump at a pressure ratio of at least 2.0 such that the passage of the fluid containing anthrax spores through the positive-displacement pump kills at least 99.9% of the anthrax spores in the fluid.

The closest prior art is Lynch et al. (U.S. Patent No. 5,271,557) and Grenci et al. (U.S. Patent No. 5,979,075).

Lynch et al. discloses the use of a Roots-type blower to increase the temperature and pressure of a gas stream containing volatile organic contaminants (VOC's) in order to facilitate removal of the contaminants downstream in a carbon adsorption processing unit. However, Lynch et al. does not teach or suggest a process for killing at least 99.9% of anthrax spores in the fluid using the positive displacement pump operated at an increased pressure ratio.

Grenci et al. discloses a method of altering a fluid-borne contaminant, comprising the steps of: providing a roots-type positive displacement pump (2) having an inlet (11) and an outlet (12); connecting said pump inlet to a source of contaminated fluid (recirculating purge gas containing contaminants such as hydrocarbons); operating said

pump at a pressure ratio sufficient to elevate the pressure and temperature of the fluid and certain contaminants passing through the pump to alter the contaminants passing through said pump (see col. 1, claims 13-28; col. 2, lines 25-60; col. 4, lines 1-31; col. 7, lines 1-15; claims 1-7). However, Grenci fails to specifically disclose a process for killing substantially all biological contaminants on the fluid. More specifically, Grenci et al fails to teach a process of killing at least 99.9% of anthrax spores in the fluid using a positive displacement pump operated at an increased pressure ratio.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean E. Conley whose telephone number is 571-272-8414. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

sec AEC

March 28, 2007



GLADYS JP CORCORAN  
SUPERVISORY PATENT EXAMINER